

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
6 May 2005 (06.05.2005)

PCT

(10) International Publication Number
WO 2005/040395 A1

(51) International Patent Classification⁷: C12P 21/04, (74) Agent: SHERWOOD, Pamela J.; Bozicevic, Field & C12N 15/74 Francis LLP, 1900 University Avenue, Suite 200, East Palo Alto, CA 94303 (US).

(21) International Application Number:
PCT/US2004/035302

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: 22 October 2004 (22.10.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/513,876 22 October 2003 (22.10.2003) US

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicants (*for all designated States except US*): KECK GRADUATE INSTITUTE [US/US]; 535 Watson Drive, Claremont, CA 91711 (US). ALDER BIOPHARMACEUTICALS, INC. [US/US]; 21823 30th Drive SE, Suite 200, Bothel, WA 98021 (US).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): CREGG, James M. [—/US]; 535 Watson Drive, Claremont, CA 91711 (US). LATHAM, John [—/US]; 2409 10th Avenue W., Seattle, WA 98119 (US). LITTON, Mark [—/US]; 913 W. Raye Street, Seattle, WA 98119 (US). SCHATZMAN, Randall [—/US]; 5733 238th Place NE, Redmond, WA 98053 (US). TOLSTORUKOV, Ilya I. [—/US]; 174 Marywood Avenue, Claremont, CA 91711 (US).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2005/040395 A1

(54) Title: METHODS OF SYNTHESIZING HETEROMULTIMERIC POLYPEPTIDES IN YEAST USING A HAPLOID MATING STRATEGY

(57) Abstract: Methods are provided for the synthesis and secretion of recombinant hetero-multimeric proteins in mating competent yeast. A first expression vector is transformed into a first haploid cell; and a second expression vector is transformed into a second haploid cell. The transformed haploid cells, each individually synthesizing a non-identical polypeptide, are identified and then genetically crossed or fused. The resulting diploid strains are utilized to produce and secrete fully assembled and biologically functional hetero-multimeric protein.